

# Engineering & Technology Educators

Volume 1, Issue 2

Indiana Tech Flash

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## How Far Can You Chunk?

**What is in a name?** That which we call autumn by any other name would smell as sweet. It is not the weather nor falling leaves, nor the tractor's engine roar as they collect the fruits of the earth, nor any other part belonging to autumn.....

OK...sorry but, I was thinking, what could be more fun than doing an activity in your school? AND then it hit me.....doing one **OUT-SIDE** of your school?

I know several of you already do trebuchets and ballistic devices, how about Punkin Chunkin? Lets take the next step and showcase our students' abilities to use Science, Technology, Engineering and Math by having them compete to see which TEAM can throw a small pumpkin or other gourd in an open area. It could also be a part of a

fund raising effort, an open house, community celebration or parent night.

Not only can you involve the community, parents and students you can take the opportunity to collaborate with the math and science teachers in your school.

I think it could be a great learning experience for your student, parents, teachers, community, counselors, and administration.... NOT to mention the publicity for your class. Nothing like shameless self-promotion!!

I am currently working on a possible lesson plan/unit on this very idea and would love some input. Send me your ideas, photos, links, and stories if you are willing to share!!

Here are a few links that I found so far in my re-

search. See what you think of these resources. Just click on the word or picture.



[Trebuchet.com](http://Trebuchet.com)



[Catapult Crazy](http://Catapult Crazy)



**Mousetrap Design Competition**



## Don't miss the 2010 World Punkin Chunkin Championship Thanksgiving night on Science Channel and Science Channel HD

Since 1986, Sussex County, Delaware has been home to the annual Punkin Chunkin World Championships — a three-day festival where hardcore engineers and backyard tinkerers trailer their gigantic, home built contraptions with one common goal: to launch eight to 10-pound pumpkins as far as mechanically possible.



<http://science.discovery.com/tv/punkin-chunkin/>



## America's Best Careers 2010: Science and Technology—by U.S. News Staff

There's an "app" for everything these days, as consumers make technology a critical role in every part of their lives. Computer software engineers make much of it possible, while computer systems analysts get companies on the road to technological efficiency.

[\[Read more about America's Best Careers 2010.\]](#)

Information technology intersects plenty with environmental and medical science in today's growth careers. Biomedical engineers apply the science of engineering to the problems of the human body and medical care. Meteorologists and hydrologists use increasingly sophisticated technology to monitor the earth—whether its water or its weather.

[Computer software engineer](#); [Systems analyst](#); [Network architect](#); [Biomedical engineer](#); [Environmental science technician](#); [Hydrologist](#); [Environmental engineering technician](#); [Civil engineer](#); [Meteorologist](#)



LINK: <http://money.usnews.com/money/careers/articles/2009/12/28/the-50-best-careers-of-2010.html>

### Top 20 Job Skills Demanded in Indiana

#### *Indiana employers most often look for these skills:*

- 1 Work Cooperatively as A Team Member - good/clear communication, good questions, good compromising abilities, effective cooperation.
- 2 Consistently Apply Good Listening Skills - listen with full attention, repeat back instructions to make sure they are correct, rephrase what you have heard in your own words.
- 3 Maintain a Safe Work Environment - follow rules and help others to follow them; keep your area

- clean and organized.
- 4 Consistently Follow Safety Procedures
- 5 Follow Detailed Instructions
- 6 Load and Unload
- 7 Ability and Willingness to Move Heavy Objects
- 8 Manage Time Effectively - organization, follow-through, multitasking.
- 9 Use Hand Tools
- 10 Use Basic Math - add, subtract, multiply, divide; figure fractions; all at least at the 10th grade level.
- 11 Acquire and Evaluate Information - use good logic and judgment.

ment.

- 12 Multitask
- 13 Make Effective Decisions
- 14 Apply Industry Terms and Concepts - learn the lingo and the ideas.
- 15 Follow Emergency Procedures
- 16 Use Power Tools Safely
- 17 Perform Basic Assembly Tasks
- 18 Organize & Work With Detailed Office and/or Warehouse Records
- 19 Apply Technology to Tasks - stay up to date on all work-related technology.
- 20 Follow and Give Instructions Accurately





## NASA News-



### ISS EarthKAM Fall 2010 Mission

Middle school educators are invited to join NASA for the International Space Station EarthKAM Fall 2010 Mission from **Oct. 12-15, 2010**. Find out more about this exciting opportunity that allows students to take pictures of Earth from a digital camera aboard the International Space Station

ISS EarthKAM is a NASA-sponsored project that provides stunning, high-quality photographs of Earth taken from the space shuttle and the space station. Since 1996, ISS EarthKAM students have taken thousands of photographs of Earth by using the World Wide Web to direct a digital camera on select spaceflights and, currently, on the International Space Station.

For more information about the project and to register for the upcoming mission, visit the ISS EarthKAM home page [www.EarthKAM.ucsd.edu](http://www.EarthKAM.ucsd.edu)

If you have questions about the EarthKAM project, please e-mail [ek-help@earthkam.ucsd.edu](mailto:ek-help@earthkam.ucsd.edu).

### This month in Exploration

#### 85 Years Ago

October 26, 1925: Lt. James H. Doolittle of the United States Air Service won the Schneider Cup Race flying a Curtiss-R3 C-2 seaplane racer in Baltimore. He also broke the seaplane speed record by attaining 245.7 mph during the race.

#### 75 Years Ago

October 30, 1935: The First Boeing B-17 "Flying Fortress" prototype crashed on takeoff at Wright Field in Ohio. The control locks were left on during flight-testing. Despite the crash, the United States Army Air Corps was interested in using the plane as a strategic bomber. The "Flying Fortress" would eventually be flown by the U.S. in World War II.

#### 40 Years Ago

October 20-27, 1970: The former USSR launched the Zond 8 towards the moon from an Earth orbiting platform, the Tyazheliy Sputnik. The spacecraft transmitted images of earth and of the lunar surface, and obtained various scientific measurements.

#### 25 Years Ago

October 3, 1985: NASA launched space shuttle Atlantis (*STS-51-L*) from NASA's Kennedy Space Center, Fla. on its first flight. The shuttle crew deployed a classified satellite for the United States Department of Defense.

#### 20 Years Ago



**Lt. James H. Doolittle of the United States Air Service and his Curtiss-R3 C-2 seaplane.**  
Credit: NASA info

October 6, 1990: NASA launched space shuttle Discovery (*STS-41*) from NASA's Kennedy Space Center, Fla. with the Ulysses solar spacecraft aboard. Ulysses was designed by the European Space Agency (ESA) to explore the heliosphere of the sun.

#### 10 Years Ago

October 11-24, 2000: NASA launched space shuttle Discovery (*STS-92*) from NASA's Kennedy Space Center, Fla. Discovery docked with the International Space Station. The crew installed a base structure for the U.S. solar array (the "Z-1 Truss") and an orbiter docking station for the U.S. segment of the space station (the "Pressurized Mating Adapter 3"). They also completed four space walks.

[http://www.nasa.gov/exploration/thismonth/this\\_month\\_oct10.html](http://www.nasa.gov/exploration/thismonth/this_month_oct10.html)

## DESIGN SQUAD

PBS's *Design Squad* is seeking quotes and photos from teachers using *Design Squad* in their classrooms. Your submission may be selected for use in a series of articles to be published in ITEEA's *The Technology and Engineering Teacher* magazine. All submissions are welcome! We are particularly interested in hearing positive experiences from teachers and seeing photos of students engaged in the following activities:

**Kick Stick  
On Target  
Helping Hand  
Harmless Holder  
Sky Glider**



E-mail your submissions to [margot.sigur@wgbh.org](mailto:margot.sigur@wgbh.org)  
(Please put "ITEEA" and "Design Squad" in the subject line of the e-mail.)

Or post them to Facebook at:  
<http://www.facebook.com/pages/Design-Squad/#!/pages/Design-Squad/62328461927?ref=ts> (You'll have to become a fan first!)

**We look forward to finding out more about your experiences with *Design Squad*!**

## INDIANA Core 40 with Technical Honors (THD)

### State Recognized Certifications for the Core 40 with Technical Honors Diploma Indiana Department of Education - Spring 2010

The certifications listed may be used in meeting the "state-approved industry recognized certification" option of Indiana's Core 40 with Technical Honors Diploma. Certifications are listed by the corresponding Career & Technical Education course title and are reviewed by the Indiana Department of Workforce Development, Indiana Department of Education, Indiana Commission for

Higher Education, and the Indiana Association of Career & Technical Education Districts (IAC TED). Newly added certifications are listed in the underlined and italicized text. Please note that not all state course titles have an associated list of certifications. Requests for including additional certifications to this list will be considered by the certification selection committee.

For comparison of **Core 40 Diplomas** go to:

[http://www.doe.in.gov/sservices/counseling/docs/comparison\\_new\\_diplomas.pdf](http://www.doe.in.gov/sservices/counseling/docs/comparison_new_diplomas.pdf)



<http://www.msscusa.org/index.htm>

DOE Code	Engineering & Technology Education - Indiana State Approved Course Title	IN CTE Area	State/National Certificates
4784	Manufacturing Systems	Engineering & Technology Education	Manufacturing Skills Standards Certification (MSSC)
4796	Manufacturing Process	Engineering & Technology Education	Manufacturing Skills Standards Certification (MSSC)

## WELCOME TO THE IDOE— pages of interest

There are many times that I get asked where is .....? Often times I direct that question to the Department of Education website. In this section I have highlighted several areas that you might need throughout the year. If you can think of any others to be added please send an email.

### [General Education Links](#)

INDIANA DEPARTMENT OF EDUCATION

<http://www.doe.in.gov/>

INDIANA APPROVED COURSE TITLES

<http://www.doe.in.gov/publications/courses.html>

TEACHER LICENSE—look up

<http://dc.doe.in.gov/public/EducatorLookup/TeacherInquiry.aspx>

TEACHER LICENSE—renewing or adding

<http://www.doe.in.gov/educatorlicensing/>

### [Engineering and Technology Education Links](#)

ETE—general

<http://www.doe.in.gov/octe/technologyped/>

TECHNOLOGY EDUCATION STANDARDS

<http://dc.doe.in.gov/Standards/AcademicStandards/PrintLibrary/technology.shtml>

ETE CURRICULUM MODEL w/ links

[http://www.doe.in.gov/octe/technologyped/curriculum\\_model.html](http://www.doe.in.gov/octe/technologyped/curriculum_model.html)

DUAL CREDIT

<http://www.doe.in.gov/octe/technologyped/dualcredit.html>

INDIANA COLLEGE AND CAREER PATHWAYS

<http://www.doe.in.gov/pathways/>

COLLEGE AND CAREER PREPARATION

<http://www.doe.in.gov/octe/>

SUPER MILEAGE CHALLENGE-IMSTEA

<http://www.doe.in.gov/octe/technologyped/>

## Engineering & Technology Education WEBEX



### [WebEx](#) is an easy way to share ideas with anyone, anywhere

It combines real-time desktop sharing with phone conferencing so everyone sees the same thing while you talk. It's far more productive than emailing files and struggling to get everyone on the same page over the phone. And it can often eliminate the need for people to travel and meet on site. you can use it from any computer

(Windows, Mac, Linux, or Solaris) -- as well as your iPhone, Blackberry, or any other WiFi or 3G-enabled mobile device. There's no complicated installation. Participants don't need to be WebEx subscribers to join online

**Topic:** ETE Teacher Conference

**Date:** Thursday, October 14, 2010

**Time:** 1:00 pm, Eastern Daylight Time

**Meeting Number:** 640 642 219

**Meeting Password:** not required

**To Join online:** 1. Go to <https://indiana-doe.webex.com/indiana-doe/j.php?ED=135735707&UID=0&RT=MiMxMQ%3D%3D>

**To join the audio conference only:** 1-866-699-3239

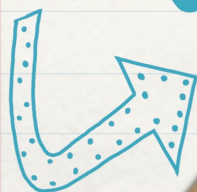
**You can view a short IDOE-produced online tutorial video at:** <http://media.doe.in.gov/WebEx/help/WebExUserVideo.html>




**STEMworksINDIANA**

science • technology • engineering • math

# JOIN US!



## STEMscholars

is designed to create educational and occupational opportunities for disadvantaged students. We develop tools so the students may identify their occupational interests, hone in on appropriate educational pathways, transform into STEM career candidates and become employed in gateway STEM jobs. A total of 100 area high school juniors and seniors are recruited to become STEM Scholars affording them opportunities for tutoring, mentoring, job shadowing, internships, field trips, college-level credit courses, workshops about college selection and financial aid, financial literacy training, scholarships, and job placement.

Mentoring is a vital feature of STEM Scholars. It creates a relationship between the student and a professional who cares about him or her. By changing their perspective of what STEM offers, you, the Mentor, can start impacting your Scholars' life. Sometimes it may be as simple as discussing career goals, ambitions, or what college is like.

The Mentor can be the participant's touchstone in his or her area of interest, helping the participant, likely a first-generation college student, find his or her way through the intimidating maze of higher education while being a role model when facing day-to-day issues.

Join us in shaping the lives of the next generation of STEM leaders.

[www.stemworksindiana.org](http://www.stemworksindiana.org)



### The Hoosier Environmental Council's Our Place Program: A Hands On Approach to Environmental and Civics Education

Our Place is the Hoosier Environmental Council's K-12 Place-Based Education project, which combines environmental education with civic engagement and student voice. Our Place facilitates student-driven projects based on environmental issues within their own communities.

#### Background on Our Place

- The Our Place project is based on nationally renowned environmental educator David Sobel's book *Place-Based Education, Connecting Classrooms and Communities*.
- Place-based education emphasizes hands-on, real world learning experiences; enhances student appreciation for the natural world; and develops student awareness of civic responsibility.
- Discovery and self-directed inquiry give students ownership of the issues they choose to study while meeting state academic standards.
- Sobel describes it as "a starting point to teach language arts, mathematics, social studies, science, and other subjects across the curriculum."



#### Teachers participating in the workshops will receive

- Sub pay for attending the workshop (if held during the week) or a \$100 stipend (if held on a Saturday)
- A personal copy of David Sobel's book *Place-Based Education Connecting Classrooms and Communities*
- Copies of *The Kid's Guide to Social Action* by Barbara A. Lewis and *How to Change the World—Social Entrepreneurs and the Power of New Ideas* by David Bornstein for their school corporation's professional library

Teachers attending a workshop and signing the Our Place contract will be required to complete an Our Place project with at least one class during the 2010-2011 school year, to participate in evaluation of the project, to meet with a resource person at least 3 times during the school year, to set up an end-of-the-project presentation in which students share their project with the public and to write an outline of their project for the HEC website.

#### To help with their semester-long Our Place project, teachers will receive

- A \$300-stipend for classroom supplies related to the project
- \$50 for a student presentation and celebration of final projects
- Assistance from a resource person who will help identify guest speakers, supplies and materials for the project.

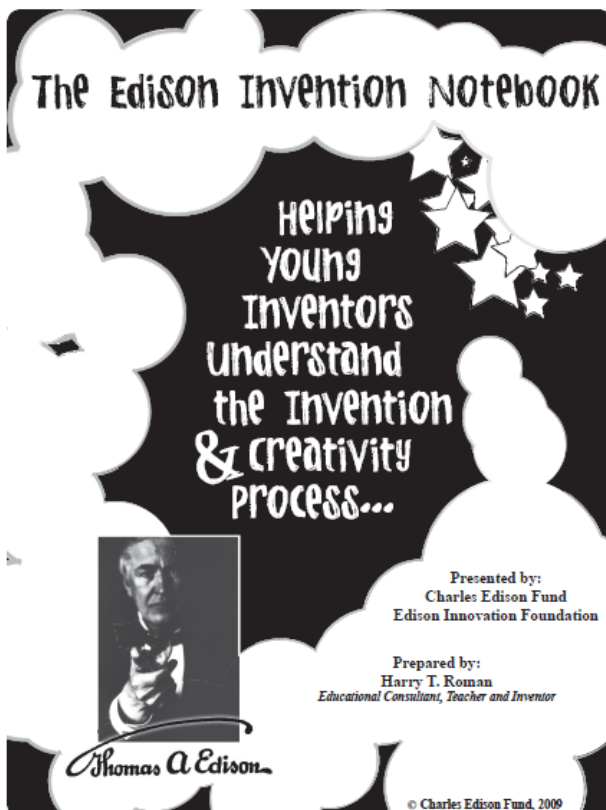
Learn more by contacting Trish Whitcomb, Our Place Coordinator, at [twhitcomb@hecweb.org](mailto:twhitcomb@hecweb.org)



### NATIONAL ENGINEERS WEEK FOUNDATION OPENS REGISTRATION FOR 19th ANNUAL FUTURE CITY® COMPETITION

Students from Nearly 40 Regions  
Across The Country To Be Tasked  
With Engineering, Designing and De-  
veloping Virtual and On-Site Health  
Care Systems for Clinics and Hospi-  
tals of Future Generations

2011 Future City National Finals  
February 18th—22nd



## Engineer's Note Book Information

"Many photos show Edison at various stages of his life busily recording his experiments and ideas in his laboratory notebooks. In fact, Edison filled about 4,000 laboratory notebooks, the legacy of which is now being analyzed by scholars and technology historians."

- What is an Invention Disclosure/Notebook?
- Why is an Invention Disclosure/Notebook Important?
- What This Invention Notebook Will do for Your Students
- Patents and What They Are
- Commercializing Your Patents
- Some Tips to Using the Invention Notebook
- Some Invention Challenges to Get Student Creativity Rolling!
- Getting Started
  - 1) Understanding and Defining the Problem
  - 2) Solving the Problem.





# CONSTRUCTION CHALLENGE

PRESENTED BY:  
**VOLVO**  
Construction Equipment

## We are proud to announce that Chicago will host a Regional Rally of the AEM Construction Challenge presented by Volvo Construction Equipment!

The main website for Construction Challenge is up and running. Find out all the facts and figures here. Regional Rallies on January 15<sup>th</sup>, 2011 will have 3 hands-on Challenges. These Rally Challenges are designed so that a team need only spend 6 to 8 hours of research on a local infrastructure issue such as roads, bridges, drinking water and wastewater before coming to the Rally. A team may also benefit from practicing some Instant Challenges to develop teamwork skills, but that is completely optional. Advancing teams then will build on the Regional Rally Challenges to prepare for the Finals. Advancing teams will be sponsored by an AEM member and receive materials for Finals, a travel stipend, and opportunity for additional prizes, scholarships and internships.

Teams may register now until the team roster is full at 50 teams. Informational packets and pre-Rally surveys are mailed out after payment for registration is received. Permission from school administrator and parents for both the Regional Rally and the Finals must be submitted prior to the Regional Rally. This allows for prompt travel processing for advancing teams. The figure shows the timeline for the Construction Challenge season. The main work for teams is between the Regional Rally and the Finals.

Click on the Link to go to the Web-



## For Classroom Use

### Animated Engines

provides you with animated illustrations that show the inner workings of a variety of engines. Animated Engines features the inner workings of:

- Internal combustion engines,
- steam engines,
- Stirling engines

And much more! These are great for illustrating the basic workings of engines. Visit the site below to find out more.

<http://www.animatedengines.com/>



### Teachers Treasures

You can stock up on donated classroom essentials at the Teacher's Treasure shop in Indianapolis. They offer over 300 classroom items ranging from pencils to file cabinets and desk chairs all items are drastically marked down. For more information about the program visit

<http://www.teachertreasures.org/pages/about.php>

### Engineering is Elementary

The EiE program, developed by the Boston Museum of Science, fosters engineering and technological literacy among children. EiE lessons not only promote (STEM) learning, but also connect with literacy and social studies. Examples of elementary engineering activities will be presented by Christine Michael, Science Resource Teacher at Fort Wayne Community's John S. Irwin Elementary Math/Science Magnet school.

<http://www.sciencecentral.org/EngineeringIsElem.htm>

## IMSTEAM—To all Super Mileage Challenge Coaches

As many of you remember, the **Sullivan High School Super Mileage Team** tried to host a Super Mileage Challenge "Fun Run" last year before the race at Indianapolis. It was apparent that the timing of that event did not work for most of the teams. Our team has put together some preliminary information along with a new date that we would like to share with your team. This would be a good opportunity to field test your car, have

some fun and possibly work out any bugs before the race in Indianapolis. If you are interested please contact Mr. Brandon Small at [bsmall@swest.k12.in.us](mailto:bsmall@swest.k12.in.us) or 812-268-6301. Here are the only details that we have at this time.

The event would take place on  
**Saturday November 6, 2010**

The event would be at the Sullivan County Airport from 9:00am to 5:00pm

## Sullivan High School "FUN RUN"

10 - 15 teams allowed to participate for the 1st year

Team slots will fill up on a first come first serve basis

Entry fee of **\$10** per team

Event will be more relaxed compared to the Indianapolis race

The event will be competitive in different categories other than MPG

## Indiana State University

The Indiana State University **College of Technology** collaborates with high schools to provide opportunities for students to earn college credit for Project Lead the Way (PLTW) classes in a wide variety of programs.

### Courses:

- Introduction to Engineering Design
- Principles of Engineering
- Digital Electronics
- Aerospace Engineering
- Biotechnical Engineering
- Civil Engineering and Architecture
- Computer Integrated Manufacturing
- Engineering Design and Development

**For additional contact information see the flyer below!!**



**Indiana State University**  
More. From day one.  
**COLLEGE OF Technology**

The Indiana State University College of Technology collaborates with high schools to provide opportunities for students to earn college credit for Project Lead the Way (PLTW) classes in a wide variety of programs. Courses transfer as shown below:

PLTW Course Introduction to Engineering Design	PLTW Course Principles of Engineering	PLTW Course Digital Electronics	PLTW Course Aerospace Engineering	PLTW Course Biotechnical Engineering	PLTW Course Civil Engineering and Architecture	PLTW Course Computer Integrated Manufacturing	PLTW Course Engineering Design and Development
Receive elective credit OR credit for MET 103 in the majors:	Receive elective credit OR credit for MET 130 in the majors:	Receive elective credit OR credit for ECT 160 in the majors:	Receive elective credit OR credit can be used in the area of concentration in the majors:	Receive elective credit	Receive elective credit OR credit for CNST 106 in the major:	Receive elective credit OR credit for ECT 280 in the major:	Receive elective credit
<ul style="list-style-type: none"> <li>• Adv Manufacturing Management</li> <li>• Automation &amp; Control Engineering Technology</li> <li>• Automotive Engineering Technology</li> <li>• Electronics Engineering Technology</li> <li>• Mechanical Engineering Technology</li> <li>• Packaging Engineering Technology</li> <li>• Technology Management</li> <li>• Technology &amp; Engineering Education</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical Engineering Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Adv Manufacturing Management</li> <li>• Automotive Engineering Technology</li> <li>• Mechanical Engineering Technology</li> <li>• Technology Management</li> </ul>	<ul style="list-style-type: none"> <li>• Aviation Management</li> <li>• Professional Aviation Flight Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Construction Management</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Manufacturing Management</li> <li>• Automation &amp; Control Engineering Technology</li> <li>• Electronics Engineering Technology</li> <li>• Mechanical Engineering Technology</li> <li>• Technology &amp; Engineering Education</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Manufacturing Management</li> <li>• Automation &amp; Control Engineering Technology</li> <li>• Electronics Engineering Technology</li> <li>• Mechanical Engineering Technology</li> <li>• Technology &amp; Engineering Education</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Manufacturing Management</li> <li>• Automation &amp; Control Engineering Technology</li> <li>• Electronics Engineering Technology</li> <li>• Mechanical Engineering Technology</li> <li>• Technology &amp; Engineering Education</li> </ul>






**For more information contact:**  
 Indiana State University  
 College of Technology  
 Technology Student Services  
 Phone: 812-237-2987  
 Toll free: 888-478-7003  
 Email: techstudents@indstate.edu  
 Visit us online:  
<http://technology.indstate.edu>

**Project Lead the Way (PLTW)** is a national, non-profit organization that offers engineering and engineering technology curricula for middle and high schools.  
 PLTW Indiana – [www.in.gov/dwd/2395.htm](http://www.in.gov/dwd/2395.htm)



# IUPUI

## Scholarships for Indiana students that have taken the PLTW courses

- Electrical and Computer Engineering Technology Project Lead the Way Scholarship
- Construction Technology Project Lead the Way Scholarship
- Mechanical Engineering Technology Project Lead the Way Scholarship

<http://www.engr.iupui.edu/prospective/PLTW.pdf>

## Currently on the IUPUI website—For the School of Science and Technology incoming Freshman

- Melba Schumacher Scholarship for Mechanical Engineering
- Commitment to Engineering Excellence
- Carrier Corporation Scholarship

<http://www.iupui.edu/~scentral/freshman/inmajorspecific.html>



## Ball State University- Dual Credits for Ball State's Major in Technology Teacher Education program

6 hours of PLTW credits may be used to cover program requirements in the Major in Technology Teacher Education.

To qualify students must:

- complete the Principles of Engineering
- course at a certified school,
- pass with no lower than a "B" grade
- score at least 70% on the end-of-course assessment exam

A second higher-level PLTW course, following the same program and assessment criteria, or completion of the International Baccalaureate sequence in Design & Technology with a score of 4.0, may be used to cover the directed elective requirement in the program.

Link to BSU Technology Teacher Ed.  
<http://www.bsu.edu/technology/tte/>

PLTW courses that fulfill this second 3-hour requirement include

- Digital Electronics,
- Engineering Design & Development,
- Civil Engineering & Architecture,
- Aerospace Engineering, and
- Computer-Integrated Manufacturing.

## Vincennes University- PROJECT EXCEL PROGRAM INFORMATION



Students must have earned a grade of 'C' or higher in Introduction to Engineering & Design and Principles of Engineering to be dual enrolled in DRAF 140, ARCH 221 or DRAF 101. There are no fees.

To be approved, faculty must provide PLTW teaching credentials to Project EXCEL. Students will be dual enrolled in both PLTW and Digital Electronics or Computer Integrated Manufacturing courses.

Contact Project EXCEL  
Educational Coordinator  
Robyn Haase at  
812-888-4086 or email  
rhaase@vinu.edu

For other VU Project Excel class information got to:

[http://www.doe.in.gov/octe/technologized/docs/VU\\_Project\\_EXCEL\\_2009-](http://www.doe.in.gov/octe/technologized/docs/VU_Project_EXCEL_2009-)



## Cool Stuff!!

### Google Sketch Up Pro—FREE

Google is offering Indiana schools free licenses to Google Sketch Up Pro, a 3D modeling application for engineering, architecture, and design. License and installation information is available immediately to school administrators through the online community Google Geo Education in the Learning Connection. This community will be available to Indiana educators to support use of Google Sketch Up and Google Earth within the class-

room. Licenses are obtained by sending a request [to join the Google Geo Education community in the Learning Connection](#). Members will be able to download license keys and instructions for installation across single machines as well as network labs. Licenses are available for both Mac and Windows operating systems.

Learning Connection

<https://learningconnection.doe.in.gov>

Google Sketch Up Pro



## Quotes, pictures, and puzzles

### Engineering:

An optimist will tell you the glass is half-full; the pessimist, half-empty; and the engineer will tell you the glass is twice the size it needs to be

### Technology:

Coming together is a beginning; keeping together is progress; working together is success.

—**Henry Ford**

### Education/teaching:

I never teach my pupils. I only attempt to provide the conditions in which they can learn.

—**Albert Einstein (1879 - 1955)**

Education's purpose is to replace an empty mind with an open one.

—**Malcolm Forbes (1919 - 1990),**

### TECHNOLOGY QUIZ

1. The United States Supreme Court declared that this man invented the radio.
2. Who made the first light bulb?
3. Who is given credit for inventing the neon light?
4. In 1793 the first system of communicating over long distances via flag, what is the word for this system?
5. Who invented the telegraph key?
6. Who's idea was it to put a bell on the telephone so people would know when someone was calling?

*Answers are on the last page*

### VOGUE ILLUSION

What do you see?



## State Conference — Look at the NEW Career Pathways

Teachers, Administrators and University persons received the first viewing of the newly developed career path-ways at the annual Indiana ETEI/ACTE Fall Conference. During sessions on Saturday, attendees had a chance to critique the developed pathways, give suggestions, and ask questions about implementation. The IDOE is currently looking for instructors who would like to pilot the new developed career pathways.

The Career Pathways initiative is a three year project. During that time 40 career pathways will be developed. During the process, secondary and postsecondary instructors, industry representatives, and IDOE Curriculum Specialists team up to develop aligned sequences of secondary and, in most cases, postsecondary courses that lead to an industry-recognized credential or technical certification, or an associates or baccalaureate degree at an accredited postsecondary institution, or a registered apprenticeship.

The teams will begin developing additional pathways in Phase two of the project starting late fall into winter. teachers, University faculty, and community business person, who would like to help develop the next batch of pathways are welcome to through their hat into the ring to help guide the direction of the Pathways.

To view the Career Pathways go to <http://www.doe.in.gov/pathways/CareerPaths2010-PathwayPlans.html>

At that DOE page you can also find nomination forms to participate in the next round of pathways development.

or call Kelli McGregor @ 317-232-6990 or email: [kmcgregor@doe.in.gov](mailto:kmcgregor@doe.in.gov)

## ITEEA National Conference



Sven & Ole—ITEEA Conference Promo!!

<http://www.youtube.com/watch?v=zcCfeFV0ly4>



To join ITEEA, Click [How to Join/Renew](#)

**Start planning now !!**

**ITEEA's 73rd Annual Conference**

**Minneapolis, MN  
March 24- 26, 2011**

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*Go to [www.iteea.org/Networking/networking.htm](http://www.iteea.org/Networking/networking.htm)*

## Google Sketch Up Pro—FREE

Google is offering Indiana schools free licenses to Google Sketch Up Pro, a 3D modeling application for engineering, architecture, and design. License and installation information is available immediately to school administrators through the online community Google Geo Education in the Learning Connection. This community will be available to Indiana educators to support use of Google Sketch Up

and Google Earth within the classroom. Licenses are obtained by sending a request [to join the Google Geo Education community in the Learning Connection](#). Members will be able to download license keys and instructions for installation across single machines as well as network labs. Licenses are available for both Mac and Windows operating systems.





## TECHFLASH

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[http://www.doe.in.gov/  
octe/technologyed/](http://www.doe.in.gov/octe/technologyed/)

## Schedule of Events

- \* October 1st—All Listservs go to Learning Communities
- \* October 1st—National Lab Day entries due
- \* October 13th—IUPUI Motor Sports Day
- \* Innovation Summit— October 20th-22nd
- \* LEGO Education TETRIX Workshop—October 22 IUPUI
- \* October 29th—IMSTEA letter of Intent due
- \* November 2nd—PLTW Counselor's Conference
- \* National ITEEA conference—  
March 24 –26th

### Technology Quiz answers

1. N. Tesla
2. Joseph Swan
3. Georges Claude
4. Semaphore
5. Alfred Vail—Morse's partner

## Links

### Techdirections

is a magazine and website for technology, career/technical, and applied science education.

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<http://pbskids.org/dragonflytv/>



**Engineers Week 2011  
is February 20-26**

<http://www.eweek.org/Home.aspx>

### ASEE's eGFI brand platform!

*Creative Education Publication, Web Site and E-newsletter Inspire America's Engineers of Tomorrow*

ASEE continues to enhance its eGFI brand. Highlighting the eGFI brand platform is the 4<sup>th</sup> edition of eGFI - Engineering, Go For It. eGFI is the colorful, inspiring magazine designed to attract middle-school and high-school students, particularly minorities and young women, and their parents, teachers and counselors to the exciting world of engineering and technology. Published bi-annually, eGFI has reached over 1.7 million K-12 readers since its inception in 2003.

<http://www.egfi-k12.org/>



### Indiana Project Lead The Way

IN-PLTW website aimed to provide help to teachers, administrators, parents, and students find information about PLTW.

<http://www.tech.purdue.edu/pltw/index.html>



[https://learningconnection.doe.in.gov/  
Login.aspx](https://learningconnection.doe.in.gov/Login.aspx)



<http://www.istemnetwork.org/index.cfm>



**Engineering/Technology  
Educators of Indiana**

<http://www.etei.net/index.html>

## IACTE

<http://www.doe.in.gov/octe/facs/IACTE>



<http://www.iteea.org/EbD/Resourses/EbDresources.htm>